AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1-20 (cancelled)

21. (new): A method for preparing monodisperse biodegradable microspheres comprising the steps of:

a) preparing an emulsion comprising at least one polymer phase, which comprises an active ingredient, and at least one aqueous phase, the viscosity of the organic phase and the aqueous phase having a ratio of from 0.1 to 10;

b) subjecting the emulsion obtained to controlled laminar shearing;

c) removing the solvent from the polymer phase; and

d) isolating the microspheres so obtained.

22. (new): The method of claim 21, wherein the majority of the microspheres are constituted in majority by a biodegradable polymer.

23. (new): The method of claim 22, wherein the biodegradable polymer is selected from poly(α-hydroxy) acids, the aliphatic polyesters of poly(α-hydroxy acids), of poly(ε-caprolactones)-PCL, of polydioxanones - PDO, polyorthoesters, polyanhydrides, polycyanoacrylates, polyurethanes, polypeptides or poly(amino acids), modified polysaccharides, cellulose,

polycarbonates, polydimethylsiloxanes and poly(vinyl acetates) and their derivatives and copolymers.

24. (new): The method of claim 22, wherein the biodegradable polymer is selected from polylactic acids (PLA), and the copolymers of polylactic acid / polyglycolic acid (PLGA).

25. (new): The method of claim 21, wherein the polymer has a molecular weight of from 50 to 500 kDaltons.

26. (new): The method of claim 21, wherein the organic solvent of the organic phase of the emulsion is ethyl acetate.

27. (new): The method of claim 21, wherein the active ingredient is lipid-soluble.

28. (new): The method of claim 21, wherein the active ingredient is water-soluble.

29. (new): The method of claim 21, wherein the active ingredient is a peptide or a protein.

30. (new): The method of claim 21, wherein the emulsion prepared in step (a) comprises a hydrophilic active ingredient in combination with a lipophilic active ingredient.

31. (new): The method of claim 21, wherein the organic phase of the emulsion represents from 10 to 60% by weight relative to the total weight of the emulsion.

32. (new): The method of claim 21, wherein the organic phase of the emulsion comprises from 1 to 50%, preferably from 5 to 30% by weight of polymer.

33. (new): The method of claim 21, wherein the organic phase of the emulsion comprises from 1 to 50%, preferably from 5 to 30% by weight of active ingredient.

34. (new): The method of claim 21, wherein the emulsion is a double emulsion.

35. (new): The method of claim 21, wherein the external and/or internal aqueous phase of the emulsion contains at least one stabilizing agent and/or at least one viscosity agent.

36. (new): The method of claim 21, wherein the external and/or internal aqueous phase of the emulsion contains at least one stabilizing agent and/or at least one osmolarity agent and/or at least one surfactant and/or at least one buffer agent.

37. (new): The method of claim 21, wherein the step of calibration by laminar shearing is carried out in a Couette device.

38. (new): The method of claim 21, wherein the step of removing the solvent from the polymer phase is carried out by extraction in water.

39. (new): A method for the administration of active ingredients in the human or animal organism, making use of the microspheres that can be obtained according to claim 21.

40. (new): The method of claim 39, wherein the active ingredient is selected from antibiotics, hypolipidaemics, antihypertensives, antiviral agents, beta blockers, bronchodilators, cytostatics, psychotropic agents, hormones, vasodilators, anti-allergics, analgesics, antipyretics, antispasmodics, anti-inflammatories, anti-angiogenics,

antibacterials, anti-ulcerants, antifungals, anti-parasitics, antidiabetics, anti-epileptics, anti-Parkinsons, antimigraines, anti-Alzheimers, anti-acneics, antiglaucomic agents, anti-asthmatics, neuroleptics, antidepressants, anxiolytics, hypnotics, normothymics, sedatives, psychostimulants, anti-osteoporosis agents, anti-arthritics, anticoagulants, antipsoriasis agents, hyperglycaemics, orexigenics, anorexigenics, anti-asthenics, anticonstipation agents, antidiarrhoeals, anti-trauma agents, diuretics, myorelaxants, enuresis medicaments, erection disorder medicaments, vitamins, peptides, proteins, anticancer agents, nucleic acids, RNA, oligonucleotides, ribozymes and DNA.